



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Before the Board of Patent Appeals and Interferences

In Patent Application of

TIGHE et al

Serial No. 09/582,760

Filed: June 30, 2000

For: AIRCRAFT STRUCTURE FATIGUE ALLEVIATION

Atty. Ref.: 540-204

Group: 3644

Examiner: G. Barefoot

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October 15, 2002

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

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REPLY BRIEF

This Reply Brief is responsive to the Examiner's Answer mailed August 12, 2002 in the above-identified application. The Reply Brief is responsive to two new points of argument which are raised by the Examiner's response.

Firstly, although appellants identified claimed structural elements which are not disclosed in the cited prior art references in its Appeal Brief (the "means for receiving a first input signal," the "means for receiving a second input signal," the "means for initiating the transfer of fuel . . . in response to the first input signal" and "means for initiating the transfer of fuel . . . in response to the second input signal"), the Examiner has failed to supplement the Final Rejection by indicating where these claimed structures are disclosed in either of the cited prior art references.

14
Reply
Brief
(3)
Dates
10/25

Secondly, the test of obviousness is not that the function of appellants' claimed combination is obvious in view of the prior art, but rather that the use of the elements themselves and their combinational interrelationship is obvious. A detailed discussion of each of these new points of argument will follow.

No Disclosure of Claimed Elements

In paragraphs (a) and (b) of the "Errors in the Final Rejection" portion of appellants' Appeal Brief contained on pages 7 and 8, appellants noted that the four "means-plus-function" elements comprising appellants' claimed fuel management system were not disclosed in any of the cited prior art references.

Appellants noted that the Examiner must construe these means-plus-function claims in accordance with the corresponding structure disclosed in appellants' specification and equivalents thereof. Clearly absent from both the Final Rejection and the Examiner's Answer is any interpretation of these four recited portions of the fuel management system. Clearly, the Examiner has not followed the requirements of the Court of Appeals for the Federal Circuit in the *In re Donaldson* case and its progeny and therefore has failed to establish even what is claimed by claim 1, let alone how or where this is shown or rendered obvious in any of the prior art references.

Appellants' review of the Examiner's Answer indicates that while the Examiner believes that the function of each of these four structures may be provided by "an additional crew member," it is not the function provided which is claimed, but rather the corresponding structure disclosed in appellants' specification which provides such

function. The Examiner's repeated failure to properly analyze the "means plus function" language of independent claim 1 and to point out where, in any cited prior art reference, each of the four recited elements of the fuel management system are disclosed is a clear failure to meet the burden of establishing a *prima facie* case of obviousness as required by the Court of Appeals for the Federal Circuit (see *In re Fine*, on page 8 of appellants' Appeal Brief).

As a result, there is simply no basis for a rejection under 35 USC §103 and any further rejection thereunder is respectfully traversed.

The Test of Obviousness is With Respect to the Combination of Elements and Not With Respect to the Functionality of the Overall Combination

The Examiner suggests that, because one prior art reference teaches the desirability of adjusting fuel load for take-off and landings and another reference teaches that it is well known to do things automatically through the use of computers, it would somehow be obvious to provide appellants' four recited "means" elements with their recited interrelation in order to provide the beneficial fuel transfer. As support, the Examiner's cites the *In re Venner* case at 120 USPQ 193, 194 (CCPA 1958).

It is noted that the Examiner is relying upon a case decided 44 years ago by the predecessor to the current Court of Appeals for the Federal Circuit. It is submitted that the Federal Circuit decisions, and particularly those of more recent vintage such as *In re Rouffet* set out on page 9 of the Appeal Brief, provide a more accurate recitation of the relationship between disclosures and how those disclosures may be combined.

The Examiner does not dispute or traverse the Federal Circuit's interpretation of the PTO burden of proving obviousness that requires the examiner show some motivation to combine references and to do so must show reasons that one of ordinary skill in the art confronted with the same problems as the inventor would select the elements from the cited prior art references for combination in the manner claimed. The Examiner appears to have ignored this specific requirement by the Court of Appeals for the Federal Circuit, especially where bits and pieces are combined from various references.

As noted above, even the bits and pieces recited in appellants' claims (the four "means" recitation) are not shown, nor are even alleged to be shown, by the Examiner. Rather, the Examiner takes the position that since the overall concept of moving fuel between tanks is known to be a good thing, any system which somehow automates this transfer is going to be obvious.

The Examiner's incorrect and unsupported rationale is analogous to the relationship between vacuum tube radios and transistor radios. Both radios provide the result of amplifying and detecting radio frequency transmissions so as to provide an audible transmitted signal, whether it be music or commentary. Under the Examiner's test of obviousness, because they both function to provide the same beneficial result, a transistor radio would be obvious in view of a vacuum tube radio. Such is clearly not the case and is clearly not the standard of obviousness to which claims are scrutinized.

In view of the fact that the Examiner has not pointed out where the claimed elements are present in the cited prior art, nor has he complied with the requirements of the Court of Appeals for the Federal Circuit with respect to establishing a *prima facie*

case of obviousness, it is submitted that the rejection of claims 1-10 over the cited prior art is clearly in error and reversal thereof by this Honorable Board is respectfully requested.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: 

Stanley C. Spooner
Reg. No. 27,393

SCS:kmm
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100